

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2019/2020

TSE2251 – SYSTEMS ANALYSIS AND DESIGN

(All sections / Groups)

24 OCTOBER 2019

9.00 a.m - 11.00 a.m

(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 2 pages with **FIVE** Questions only.
2. Answer **ALL** questions. All questions carry equal marks and the distribution of the marks for each question is given.
3. Write all your answers in the Answer Booklet provided.

Question 1**Total Mark: [10 Marks]**

- (a) Distinguish between decision support system and management information system.
(4 Marks)
- (b) List any SIX activities that are performed by a manager during the project planning phase.
(3 Marks)
- (c) What is Agile methodology? List THREE key principles associated with Agile methodology.
(3 Marks)

Question 2**Total Mark: [10 Marks]**

- (a) What is competitive strategy? State THREE main types of competitive strategy.
(3 Marks)
- (b) Assuming monetary benefits of an information system at \$175,000 per year, one-time costs of \$250,000, recurring costs of \$80,000 per year, a discount rate of 12 percent, and a five-year time horizon. Calculate the Net Present Values of these costs and benefits of an information system.
(4 Marks)
- (c) Nominal group technique (NGT) is one of the methods adopted for requirements determination during the analysis phase. Briefly describe the NGT process.
(3 Marks)

Question 3**Total Mark: [10 Marks]**

- (a) Discuss unary, binary, and ternary relationships. Provide an example of each
(3 Marks)
- (b) In the following relation, a patient can receive many prescriptions for one or more medicines over time. Medicine_Name, Patient_ID and Date are the primary key attributes. State with reason whether the relation is in Second Normal Form. If it is not in Second Normal Form convert it into Second Normal Form.
(4 Marks)

PATIENT (Medicine_Name, Patient_ID, Date, Patient_Name, Refills_Allowed, ShelfLife, Dosage)

- (c) Explain THREE characteristics that should be considered when designing forms and reports
(3 Marks)

Continue...

Question 4**Total Mark: [10 Marks]**

- (a) Explain THREE guidelines for drawing Data Flow Diagrams. (3 Marks)
- (b) Draw a decision tree for the following situation. A student will drop the subject if the attendance for that subject is less than 80%, which means that the possibility to get an A is zero. Otherwise, the student may continue but the chance to score an A is not 100%, unless student did all the homework and project correctly, and scored in the final exam. (3 Marks)
- (c) Draw a context level diagram for PERFECT PIZZA that needs a system to record orders for pizza and chicken wing. When a regular customer calls PERFECT PIZZA, their name, address and last order date are automatically displayed on the screen. The total price, including taxes and delivery charges, is calculated once the order has been placed. Then the order is given to the kitchen. A receipt is printed. Customer can get a discount if special offer coupons were printed. Drivers who make deliveries give the customer a copy of the receipt and a coupon (if any). Weekly sales totals are kept for comparison with last year's performance. (4 Marks)

Question 5**Total Mark: [10 Marks]**

- (a) Explain dialogue diagramming method. Draw the dialogue diagram for an ATM machine. (3 Marks)
- (b) What is meant by configuration management? Who is the system librarian? (3 Marks)
- (c) Explain FOUR types of installation that can be chosen by organizations when replacing an old system. (4 Marks)

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